Dakota.—Yankton, 21st; Huron, 26th to 29th.

District of Columbia. - Washington City, 18th.

Illinois.—Cairo, 28th; Springfield, 23d; Anna, 27th.

Indiana.—Greencastle, 25th.

Indian Territory.—Cantonment, 22d. Iowa.—Dubuque, 26th.

Kansas.—Leavenworth, Holton, Independence, and Clay Centre, 22d; Allison, 29th.

Maine.—Eastport, 20th, 21st.

Maryland.—Baltimore and Fallston, 18th.

Massachusetts.—Thatcher's Island and Boston, 19th.

Michigan.—Grand Haven, 1st, 5th; Kalamazoo, 4th. Montana.—Fort Maginnis, 26th.
Nebraska.—North Platte, 21st, 27th; Yutan, 22d.
New Hampshire.—Mount Washington, 1st, 2d, 11th.

New Jersey.—Sandy Hook, 18th.
New York.—Oswego, 5th, 29th, 30th; Buffalo, 23d; Fort
Hamilton and Fort Columbus, 18th, 19th.

Ohio.—Cleveland, 5th.

Pennsylvania.—Philadelphia, 18th, 19th; Fallsington, 18th; Leetsdale, 24th.

Rhode Island .-- Point Judith, 8th to 11th, 16th, 18th, 19th, 20th; Narragansett Pier, 19th.

Utah.—Salt Lake City, 17th, 18th.

Virginia.-Fort Myer, 18th.

Wisconsin.—La Crosse, 1st; Beloit, 5th; Milwaukee, 23d.

## HAIL.

Fort Smith, Arkansas, 3d: heavy rain fell at 4.15 p. m., followed at 4.25 by hail, lasting eight minutes; the hail stones measured from one-fourth to one-half inch in diameter.

Fort Apache, Arizona, on the 8th, small hail stones fell for

three minutes, beginning at 4.15 p. m.

Hail is also reported to have fallen at the following places:

Fort Bidwell, California, 16th.

North Colebrook, Connecticut, 4th, 19th, 20th. Fort Wayne, Indiana, 30th. Guttenberg, Iowa, 1st, 26th.

Bowling Green, Kentucky, 18th.

Moorestown, New Jersey, 18th. Factoryville, New York, 5th.

Menand Station (near Albany), New York, 5th. Wauseon, Ohio, 18th, 20th, 21st, 22d.

Dale Enterprise, Virginia, 18th, 19th.

Embarras, Wisconsin, 21st, 23d.

Table of excessive and greatest monthly precipitation-November, 1884.

Station.	Specially heavy.		Largest monthly.	Station.	Specially heavy.		Largest monthly.
	Date.	Amt.	Amount.	Siation.	Date.	Amt,	Amount,
				North Carolina.			
lintonville	27, 28	3.10	'	Hatteras	15, 16	5.15	13.02
summerville		2.75		Do	28, 29	3.22	1 .3.0.
Bolling		2,13		Kitty Hawk	15, 16	4.07	7.14
la vette		2.00		Highland	22, 23	3.00	'''
Arkansas	l			Charlotte	28, 29	2.75	l
Lead Hill	22	2.32		Brevard	22, 23	2.65	
Florida.				Pennsylvania.	, •		
Key West	4	3.51	6.03	Wellsborough	23, 24	5.50	0.6
Do	27, 28	2.29		Drifton	23, 24	2.14	
lacksonville		3.93		Blooming Grove	23	2.10	j
Mayport		2.37		Rhode Island.	•	_	ł
ensacola	22, 23	3.21		Nayatt Point	I, 2	2.00	7.6
Kansas.		٠.	•	Texas.		-	•
ndependence	22	2.06	l i	Cleburne	22	2.75	
Louisiana.	i			Galveston	22	2.51	
Point Pleasant	27, 28, 29	6.49	7.99	New Ulm	11	2.00	
hreveport		3.13		Do	22	2.75	į
New Orleans	22	2.03		Washington Ter.		, , ,	!
Massachusetts.				Neah Bay	I	2.05	9.1
Princeton	24, 25	2.82		Do	3, 4	2,10	•
Worcester	19, 20	2.50		Tatoosh Island			6,8
Michigan.		_		West Virginia.			
Northport	24, 25	5.25?	7.00?	Helvetia	28, 29	2.00	l
Do	28, 29	2.25?		Wisconsin.		)	l
New Hampshire,	'-			Franklin	22	2.09	l
Mt. Washington	4.5	2.16	7.99		_ :	]	J
Do	23, 24	3.37				1	I

## WINDS.

The most frequent directions of the wind during November, broken down and fences leveled.

1884, are shown on chart ii., by arrows flying with the wind. Over the northern portions of the country the prevailing winds were westerly; on the Atlantic coast south of Virginia, they were northeasterly; in the southern states they were northerly, and in the other districts variable.

## HIGH WINDS.

(In miles per hour.)

Wind velocities of fifty or more miles per hour were recorded

during the month as follows:

Mount Washington, New Hampshire, 68, nw., 2d; 80, se... 5th; 96, nw., 6th; 80, nw., 7th and 8th; 60, nw., 9th and 10th; 68, nw., 12th; 60, nw., 13th; 107, nw., 14th; 100, nw., 15th; 60, nw., 18th; 64, w. and nw., 21st; 68, nw., 28th; 128, s., 23d; 96, s., 24th; 88, sw., 25th; 60, sw., 26th; 52, w., 27th; 60, sw., 28th.

Pike's Peak, Colorado, 60, w., 2d; 60, nw., 19th; 52, nw., 20th; 82, nw., 23d.

Cape Mendocino, California, 68, se., 6th; 54, s., 8th; 62, s., 9th; 64, s. 10th; 58, s., 14th.

Fort Macon, North Carolina, 55, sw., 29th.

Sandy Hook, New Jersey, 52, sw. and nw. 5th; 64, nw.,

Barnegat City, New Jersey, 52, s., 23d.

Cape May, New Jersey, 56, w., 24th.

Delaware Breakwater, Delaware, 24, se., 23d.

Buffalo, New York, 60, w., 23d.

Fort Maginnis, Montana, 56, nw., 26th.

Cheyenne, Wyoming, 56, nw., 26th.

Fort Canby, Washington Territory, 53, se., 23d.

The total movements of the air, with the highest velocities recorded during November at the various Signal Service stations are shown in the table of miscellaneous meteorological data.

## LOCAL STORMS AND TORNADOES.

New Orleans, Louisiana, 24th: a tornado occurred near Edgard, Saint John Baptist parish, about 5.30 p. m. on the 22d. The length of path was between three and four miles, and its width was but a few rods. The tornado was but a moment in passing a given point. The losses to life and property are as follows: two persons killed, and ten seriously injured; a number of mules and cattle killed; fifteen buildings destroyed; the total loss of property is estimated at \$50,000. At New Orleans a storm prevailed during the afternoon from 12.55 to 5.35 p. m.; a wind-velocity of 28 miles per hour occurred at 1.10 p. m.; no damage resulted from the storm.

A violent wind and rain storm occurred at Vacherie, Saint James' parish, Louisiana, between 4 and 5 p. m. on the 22d; the wind blew from the southeast. A heavy wind and rain storm also occurred at Thibodeaux, La Fourche parish, causing great damage to life and property. One person was killed by lightning at La Fourche Crossing.

Wilkesbarre, Pennsylvania, 23d: a heavy wind and rain storm occurred on this date. The wind during the early morning blew from the south and southwest in strong gusts. Shortly after noon rain began to fall, at first lightly, but at 6 p. m. very heavily, still accompanied by high wind, which subsided about 7 p. m., but the heavy rain continued until 11 p. m. Much damage was done in the city by the wind and rain.

Scranton, Pennsylvania: a heavy rain and wind storm occurred on the 23d, the storm being most violent about 6 p. m., and ending at 9 p. m. Trees and fences were blown down, also the upper part of a church spire.

Cumming, Forsyth county, Georgia: at 5 p. m. on the 29th, a heavy gale blew from the west; at 8 p. m. the wind changed to northwest and blew at the rate of forty-miles per hour.

Pensacola, Florida: a severe squall occurred at 1.35 a.m. on the 23d, lasting fifteen minutes, the wind attaining a velocity of thirty-two miles per hour; many trees were uprooted or